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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES T. LAGROTTA and RICHARD THOMAS LAGROTTA

Appeal 2008-003666
Application 09/919,020
Technology Center 2600

Decided: June 30, 2009¹

Before JOSEPH L. DIXON, MAHSHID D. SAADAT, and
CARLA M. KRIVAK, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

I. STATEMENT OF THE CASE

The Patent Examiner rejected claims 1-7, 10-13, 16-19, 22-25, and 28-30. The Appellants appeal therefrom under 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

A. INVENTION

The invention at issue on appeal relates to use of an over-the-air optical link within a geographically distributed base station in a wireless radio frequency communications system. (Spec. 1.)

B. ILLUSTRATIVE CLAIM

Claim 1, which further illustrates the invention, follows.

1. An RF base station apparatus, comprising:
first wireless RF communication equipment; and
wireless optical communication equipment coupled to the first wireless
RF communication equipment,
the wireless optical communication equipment being
adapted to communicate signals between the first wireless RF
communication equipment and processing and control
equipment, and
the first wireless RF communication equipment and the
processing and control equipment being non-co-located.

C. REFERENCES

The Examiner and the Board rely on the following references as evidence:

Acampora

US 6,314,163 B1

Apr. 11, 2000

Willebrand US 2002/0149811 A1 Oct. 17, 2002
Appellants admitted prior art figure 1

D. REJECTIONS

The Examiner makes the following rejections.

Claims 1-7, 10-13, 16-19, 22-25 and 28-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Fig. 1) in view of Willebrand.

II. ISSUE

Have Appellants shown that the Examiner erred in rejecting independent claim 1 and independent claim 17 under obviousness over the combination of the admitted prior art figure 1 and Willebrand?

III. PRINCIPLES OF LAW

35 U.S.C. § 103(a)

Section 103 forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 415, and discussed circumstances in which a patent might be determined to be obvious. *Id.* at 415-16 (citing *Graham v. John Deere Co.*,

383 U.S. 1, 12 (1966)). The Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 417.

The Federal Circuit recently recognized that "[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 416). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." *Id.* at 1162 (citing *KSR*, 550 U.S. at 418).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

IV. FINDINGS OF FACT

1. "[A]dmitted prior art teaches an RF base station apparatus (Fig. 1, item 105) comprising first RF communication equipment (Fig. 1, item 110), a processing and control section (fig. 1, item 120), processing and control section being at a significant distance from the RF antenna (Fig. 1, item 130). Fig. 1 of application's specification (prior art) does not teach first wireless optical communication." (Ans. 3).

V. ANALYSIS

With respect to independent claim 1, Appellants do not specifically dispute that figure 1 of the instant application is deemed to be admitted prior art. Therefore, we accept that it was well known to the art to separate the receiver and the signal processing equipment as shown in Appellants' figure 1 and to connect the two via some cable (metal or optical fiber). The Examiner relies upon the teachings of Willebrand to teach routing network traffic through an alternate communication path. (Ans. 4). Willebrand evidences the interchangeability of various modes/media of communication between units. Willebrand further supports the Examiner's position that it is "always desirable to use wireless instead of cable in expense of land areas to reduce costs without reducing the signal of the system." (Ans. 4). Therefore, we agree with the Examiner that it would have been desirable to one of ordinary skill in the art at the time the invention was made to replace the land line in the admitted prior art figure 1 with an optical connection as taught by Willebrand since Willebrand teaches the desirability and well-known use of wireless optical communication and evidences that it would have been within the level of ordinary skill in the art to convert from RF signals to optical signals. Hence, we find that the Examiner has set forth a sufficient initial showing of obviousness of independent claim 1.

Appellants contend that

Willebrand, however, like the alleged, admitted prior art does not disclose or suggest a RF base station apparatus having a first wireless RF section that is not co-located with processing and control equipment. Rather, Willebrand's transceivers 104, 214, 216 appear to comprise co-located RF and processing/control equipment.

(App. Br. 6).

Appellants have not specifically controverted that figure 1 is admitted prior art but imply that figure 1 may not show that which it clearly depicts: that the two elements, antenna and processing circuitry, are separated and not co-located. Furthermore, the Acampora '163 reference, of record, in figures 3(c) and 3(d) further evidences the well known concept of separating the antenna from the processing circuitry. Therefore, we find that the admitted prior art teaches that the RF receiver and the processing/control equipment are known to be non-co-located. With the teachings of Willebrand concerning a desire to use wireless optical communication, we find that it would have been obvious to one of ordinary skill in the art at the time the invention is made to have incorporated the wireless optical communication as taught by Willebrand into the admitted prior art figure 1 and to replace the optical land line communication as shown as they are well known alternative means of conveying the signal from one location to another. Therefore, we find Appellants' argument to be unpersuasive of error in the Examiner's initial showing of obviousness.

Alternatively, in figure 3, Willebrand teaches that, depending on the weather conditions, the signal path 212 may be implemented with the RF transmitter unit 214, which could be used to transmit to RF receiver 216, and that signal would then be transmitted via free space link 228. Paragraph [0032] of Willebrand further evidences various combinations of wireless and wired combinations for communication between different buildings wherein those skilled in the art would have readily understood the required signal conversions to achieve the traversal of the various systems and modes of communication.

With respect to independent claim 17, Appellants have not set forth their arguments under a separate heading as required by 37CFR §41.37(c)(1)(vii). Therefore, claims 17-19, 22-25, and 28-30 should stand or fall with independent claim 1.

For completeness we will address the specific arguments presented with respect to independent claim 17. Appellant argues the bodily incorporation of each of the two teachings and identifies the flaws in each individual reference at page 7 of the Brief. As discussed above, Willebrand teaches the alternative use of various modes of communication of a signal and evidences that those skilled in the art would have known how to convert the RF signal received in the admitted prior art figure 1 into a wireless optical signal. These alternative signals in Willebrand teach the alternative use of the various modes of communication depending on weather conditions affecting signal propagation of the optical signals. Therefore, we do not find Appellants' argument persuasive of error in the Examiner's initial showing of obviousness

VI. CONCLUSION

For the aforementioned reasons, Appellants have not shown that the Examiner erred in rejecting claims 1 and 17 under obviousness over the admitted prior in view of Willebrand.

VII. ORDER

We affirm the obviousness rejections of claims 1-7, 10-13, 16-19, 22-25, and 28-30.

AFFIRMED

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PEB

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